

06-15-05

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PTO/SB/21 (09-04)

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# TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

	Application Number	10/634,020	
	Filing Date	08-04-2003	
	First Named Inventor	<i>Lu et al. Cas et al.</i>	
	Art Unit	1725	
	Examiner Name	Tran, Len	
Total Number of Pages in This Submission	74	Attorney Docket Number	12004

## ENCLOSURES (Check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Change of Correspondence Address	<input checked="" type="checkbox"/> Other Enclosure(s) (please Identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Terminal Disclaimer	IDS Letter; Copies of Cited Documents; PTO-2038; Return Receipt Post Card
<input checked="" type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> Request for Refund	
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Reply to Missing Parts/ Incomplete Application	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53		
Remarks		

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Battelle Memorial Institute		
Signature	<i>William B. Richards</i>		
Printed name	William B. Richards		
Date	06-13-2005	Reg. No.	44,301

## CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature	<i>Judy Readman</i>		
Typed or printed name	Judy Readman	Date	6/14/2005

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Effective on 12/08/2004.

Pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

# FEE TRANSMITTAL For FY 2005

Applicant claims small entity status. See 37 CFR 1.27

**TOTAL AMOUNT OF PAYMENT** (\$)  
**180.00**

**Complete if Known**

Application Number	10/634,020
Filing Date	08-04-2003
First Named Inventor	Lu et al.CAO et al.
Examiner Name	Tran, Len
Art Unit	1725
Attorney Docket No.	12004

**METHOD OF PAYMENT** (check all that apply)

Check  Credit Card  Money Order  None  Other (please identify): \_\_\_\_\_  
 Deposit Account Deposit Account Number: 021266 Deposit Account Name: Battelle Memorial Institute

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

Charge fee(s) indicated below  Charge fee(s) indicated below, except for the filing fee  
 Charge any additional fee(s) or underpayments of fee(s)  Credit any overpayments  
under 37 CFR 1.16 and 1.17

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

**FEE CALCULATION****1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

<u>Application Type</u>	<u>FILING FEES</u>		<u>SEARCH FEES</u>		<u>EXAMINATION FEES</u>		<u>Fees Paid (\$)</u>
	<u>Fee (\$)</u>	<u>Small Entity Fee (\$)</u>	<u>Fee (\$)</u>	<u>Small Entity Fee (\$)</u>	<u>Fee (\$)</u>	<u>Small Entity Fee (\$)</u>	
Utility	300	150	500	250	200	100	_____
Design	200	100	100	50	130	65	_____
Plant	200	100	300	150	160	80	_____
Reissue	300	150	500	250	600	300	_____
Provisional	200	100	0	0	0	0	_____

**2. EXCESS CLAIM FEES**Fee Description

Each claim over 20 (including Reissues)

Each independent claim over 3 (including Reissues)

Multiple dependent claims

<u>Total Claims</u>	<u>Extra Claims</u>	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>	<u>Small Entity</u>	<u>Fee (\$)</u>	<u>Fee (\$)</u>
- 20 or HP =	x	=		50	25	

HP = highest number of total claims paid for, if greater than 20.

<u>Indep. Claims</u>	<u>Extra Claims</u>	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>	<u>Multiple Dependent Claims</u>	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>
- 3 or HP =	x	=		200	100	

HP = highest number of independent claims paid for, if greater than 3.

**3. APPLICATION SIZE FEE**

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

<u>Total Sheets</u>	<u>Extra Sheets</u>	<u>Number of each additional 50 or fraction thereof</u>	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>
- 100 =	/ 50 =	(round up to a whole number) x	=	

**4. OTHER FEE(S)**

Non-English Specification, \$130 fee (no small entity discount)

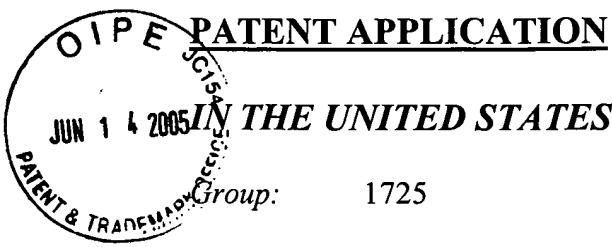
Other (e.g., late filing surcharge): IDS180.00**SUBMITTED BY**

Signature	<u>William B. Richards</u>	Registration No. (Attorney/Agent) 44,301	Telephone 614-424-5612
Name (Print/Type)	William B. Richards		

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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06-15-05



**THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Group: 1725 )  
Attorney )  
Docket: 12004 )  
Applicant: Cao et al. )  
Title: Resistance Spot Welding )  
Electrode )  
Serial No.: 10/634,020 )  
Filed: 08-04-2003 )  
Examiner: Tran, Len )

Certificate Under 37 CFR § 1.10

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as Express Mail in an envelope addressed to Commissioner for Patents, Alexandria, VA 22313-1450.

on 6/14/2005

\_\_\_\_\_  
Judy Readman

ED 794591232 US  
Express Mail

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313

Sir:

Submitted herewith are patents, publications, or other information, which may be material, as defined in 37 CFR § 1.56(b), to the examination of this application, and in respect of which, there may be a duty to disclose in accordance with 37 CFR § 1.56(a). Also submitted herewith are forms PTO/SB/08A and PTO/SB/08B on which are listed all cited items of information.

The following references are enclosed:

**Foreign Documents:**

A1 GB 2 358 826 A 08-08-2001 Weerasinghe

06/16/2005 LWONDIM1 00000080 10634020

01 FC:1806

180.00 OP

Other Art – Non-Patent Literature Documents:

BROWNE, D.J. et al.; Computer Simulation of Resistance Spot Welding in Aluminum: Part I; Welding Research Supplement; pp. 339-s-344-s

BROWNE, D.J. et al.; Computer Simulation of Resistance Spot Welding in Aluminum: Part II; Welding Research Supplement; pp. 417-s-422-s

EAGER, T.W.; Resistance Welding: a Fast, Inexpensive and Deceptively Simple Process; Keynote Address; pp. 247-351

IRVING, ROBERT R.; Resistance Welding of High-Volume Aluminum Automotive Assemblies; MetalForming; March 2001; pp. 27-32

NEID, H.A.; The Finite Element Modeling of the Resistance Spot Welding Process; Welding Research Supplement; April, 1984; pp 123-s-132-s

WU, K.C. et al.; Resistance Spot Welding of Titanium Alloy 8Al-1Mo-1V; Welding Research Supplement; August 1965; pp. 365-s-371-s

ZHOU, M. et al.; Relationships between Quality and Attributes of Spot Welds; Welding Research Supplement; April, 2003; pp. 72-s-77-s

Resistance spot welding; TWI Knowledge Summary; [www.twi.co.uk/j32k/protected/band\\_3/kssaw001.html](http://www.twi.co.uk/j32k/protected/band_3/kssaw001.html)

KHAN et al.; Numerical Thermal Model of Resistance Spot Welding in Aluminum; Journal of Thermophysics and Heat Transfer; Vol. 14, No.1; January-March 2000; pp 88-95

While the information referred to in this Information Disclosure Statement may be material pursuant to 37 CFR §1.56(b), the filing of this Information Disclosure Statement is

not intended, pursuant to 37 CFR §1.97(h), to constitute an admission that any patent, publication, or other information referred to is, or is considered to be, material to the patentability of this invention. Further, pursuant to 37 CFR §1.97(g), the filing of this Information Disclosure Statement should not be construed as a representation that a search has been made. Finally, the filing of this Information Disclosure Statement shall not be construed as a representation that no other material information exists and shall not be construed as an admission against interest in any manner.

Pursuant to 37 CFR § 1.97(c), this Information Disclosure Statement is being filed before the mailing date of a Final Office Action under 37 CFR § 1.113 and before the mailing date of a Notice of Allowance under 37 CFR § 1.311. A fee of \$180.00 as set forth in 37 CFR § 1.17(p) for submission of an Information Disclosure Statement under 37 CFR § 1.97(c)(2) is enclosed. Please charge any additional fee or credit any overpayment in connection with this submission to the credit card account shown in the enclosed form PTO-2038. A duplicate copy of this authorization is also enclosed.

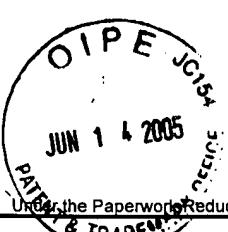
Respectfully submitted,



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William B. Richards, Esq.  
Attorney for Applicants  
Reg. No. 44,301

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PTO/SB/08A (08-03)

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Substitute for form 1449/PTO

## **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

*(Use as many sheets as necessary)*

Sheet

of 2

**Complete if Known**

Application Number	10/634,020
Filing Date	08-04-2003
First Named Inventor	Buet et al. <i>Cao et al.</i>
Art Unit	1725
Examiner Name	Tran, Len
Attorney Docket Number	12004

## **U. S. PATENT DOCUMENTS**

## **FOREIGN PATENT DOCUMENTS**

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)			
	A1	GB 2 358 826 A	08-08-2001	Weerasinghe	

Examiner Signature		Date Considered	
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**\*EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>		<b>Complete if Known</b>	
		Application Number	10/634,020
		Filing Date	08-04-2003
		First Named Inventor	Lu et al. Cao et al.
		Art Unit	1725
		Examiner Name	Tran, Len
Sheet	2	of	2
		Attorney Docket Number	

<b>NON PATENT LITERATURE DOCUMENTS</b>				
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T <sup>2</sup>
	B1	BROWNE, D.J. et al.; Computer Simulation of Resistance Spot Welding in Aluminum: Part I; Welding Research Supplement; pp. 339-s-344-s		
	B2	BROWNE, D.J. et al.; Computer Simulation of Resistance Spot Welding in Aluminum: Part II; Welding Research Supplement; pp. 417-s-422-s		
	B3	EAGER, T.W.; Resistance Welding: a Fast, Inexpensive and Deceptively Simple Process; Keynote Address; pp. 247-351		
	B4	IRVING, ROBERT R.; Resistance Welding of High-Volume Aluminum Automotive Assemblies; MetalForming; March 2001; pp. 27-32		
	B5	NEID, H.A.; The Finite Element Modeling of the Resistance Spot Welding Process; Welding Research Supplement; April, 1984; pp 123-s-132-s		
	B6	WU, K.C. et al.; Resistance Spot Welding of Titanium Alloy 8A1-1Mo-1V; Welding Research Supplement; August 1965; pp. 365-s-371-s		
	B7	ZHOU, M. et al.; Relationships between Quality and Attributes of Spot Welds; Welding Research Supplement; April, 2003; pp. 72-s-77-s		
	B8	Resistance spot welding; TWI Knowledge Summary; <a href="http://www.twi.co.uk/j32k/protected/band_3/kssaw001.html">www.twi.co.uk/j32k/protected/band_3/kssaw001.html</a>		
	B9	KHAN et al.; Numerical Thermal Model of Resistance Spot Welding in Aluminum; Journal of Thermophysics and Heat Transfer; Vol. 14 No. 1; January-March 2000		

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.  
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**Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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